

The determination of the osmotic pressure of bacteria

E. N. Mishustin. *Microbiology* (U. S. S. R.) 6, 435-48
in English 44(6) (1937) (cf. *Zent. Bak. Parasitenk.* Org. II
93, 371, 11, 95, 256 (1939)). The plasmolytic technic of os-
motic pressure determinations, unreliable when applied to bacteria,
some bacteria (*Bac. mycoides* and *Bac. subtilis*) show no
plasmolysis in 0.1-0.8 mol. NaCl, while *Bac. lemnii* and no
Bac. prodigiosum plasmolyze only to 50%. This is
explained by the presence of a readily collapsing envelope
in these bacteria, which prevents the protoplast from sepa-
rating from the envelope in hypertonic solns. A study was made
of the volumetric method of osmotic pressure determina-
tion. The percentage changes in vol. over controls of yeast cells
in wort, H₂O, and 0.4, 0.5, 0.6, 0.7 and 0.8 mol. of NaCl
for a 24-hr. yeast culture were 0, 0, -12.7 + 2.2, -42.6,
-40.2 and -41.7, resp., and for 0, 0, -4.4, -12.9, -40.1,
-46.5 and -51.6%, resp., for a 6-day yeast culture. The
percentages of plasmolyzed cells in 0.4, 0.5, 0.6, 0.7
and 0.8 mol. NaCl were 0.0, 0.0, 0.0, 3.5 and 11% for the
24-hr. and 0.0, 0.0, 7.34 and 43% for the 6-day cul-
ture. The ratios of h_1/h_2 (an indication of the decrease in
cell vol.), where h_1 is the height of the sediment in meat-
peptone broth and h_2 is the height in NaCl solns. of varying
concns. after the 2nd centrifugation, for *Bac. herbicola*
in the control, H₂O, 0.1, 0.2, 0.3 and 0.4 mol. NaCl were
100, 110, 87.7, 60, 70.1 and 55.6%, resp. For *Bac.*
mycoides cultures on common agar h_1/h_2 ratios in the control
0.1, 0.2, 0.3, 0.4, 0.5 and 0.6 mol. NaCl were 100.2
80.0, 87.5, 82.0, 77.0, 60.0 and 57.7%, resp. For the
same culture on salt agar in the same concns. h_1/h_2
91.1, 98.3, 90.4, 91.8, 90.6, 81.8 and 73.3%, resp.

S. A. Karkala

S. A. Kartala

ASA-51A METALLURGICAL LITERATURE CLASSIFICATION

MISHUSTIN, Ye. N.

"The Physiological significance of the process of urea decomposition by bacteria." Arch. sci. biol. (USSR) 43, Nos. 2-3, 165-175. 1936

Two strains of urea-decompg. bacilli were studied in regard to their C. and N nutrition.

MISHUSTIN, S.P.

Surgeon's technique in the use of evacuated polymer in the
rectal rectocele. Uch. zap. tivr. ges. med. inst. RFGS-AKAD. (cf.
(MIRA 1987))

1. Kafedra otchchey khirurgii (zav. - prof. V.V. Bodailin)
Stavropolskogo meditsinskogo instituta (rektor vseglazhenny
deyatel' nauki, Prof. V.G. Rudylin) i tivs khirurgicheskoy ots-
deleniyu (zav. V.M. Shiba), krovotok vleniheckoy bol'niicy
(glavnnyy vrach Yu.E. Yotov).

MISHUSTIN, S.P.

Diagnosis of residual intrapulmonary cavities following
the evacuation of hydatid cysts. Uch. zap. Stavr. Gos.
med. inst. 12:206-207 '63.

Surgical treatment of evacuated hydatid pulmonary cysts.
Ibid.:208-209

Clinical aspects of residual intrapulmonary cavities.
Ibid.:229-230

X-ray studies in residual intrapulmonary cavities. Ibid.:
231-232

Indications for surgical intervention in case of residual
intrapulmonary cavities. Ibid.:233-234 (MIRA 17:9)

1. Kafedra obshchey khirurgii (zav. prof. Yu.S. Gilevich)
Stavropol'skogo gosudarstvennogo meditsinskogo instituta i
2-ye khirurgicheskoye otdeleniye Stavropol'skoy klinicheskoy
bol'nitsy (glavnnyy vrach Yu.P. Zotov).

MISHUSTIN, N.A., starshiy elektromekhanik

Changes of the transmission level control network ~~of TPP~~
apparatus. Avtom., telem. i sviaz' 5 no. 10:43 0 '61.

(MIRA 14:9)

1. Petropavlovskaya distantsiya signalizatsii i svyazi
Yuzhno-Ural'skoy dorogi.
(Telegraph-Equipment and supplies)

ZIBOROV, Nikolay Mikhaylovich; MISHUSTIN, Mikhail Yefimovich; POPOV, German
Sergeyevich; KOMAROV, A.P., red.; LARIJENOV, G.ye., tekhn. red.

[Low-power industrial boilers] Promyshlennye parovye kotly maloi
moshchnosti. Moskva, Gos. energ. izd-v^o, 1961. 278 p.
(MIRA 14:6)

(Boilers)

KAZAKOVA, L.I., AL'FREKSHYEUKO, V.I., doktor tekhn.nauk; MISHUSTIN, I.U., kand.
tekhn.nauk; KUZNETSOVA, T.A.

Processing of polymers into film materials. Zhur. VKHO 10 no. 2160
(MIRA 1886)
164 '65.

ALEKSEYENKO, V.I., doktor tekhn.nauk; MISHUSTIN, I.U., kand.tekhn.nauk
Viscoelastic properties of compatible polymer systems. Kozh.-obuv.
prom. 6 no.11:14-18 N '64. (MIRA 18:4)

MISHUSTIN, I.U.; KREKSHINA, G.L.; CHEKRIZOVA, A.P.

Manufacture and application of glues in shoe manufacture. Kozh.-
obuv.prom. 3 no.7:36-37 JI '61. (MIRA 14:5)
(Shoe manufacture) (Glues)

88316

Combination of Polyethylene With
Other Polymers

S/191/60/000/002/002/012
B027/B058

polystyrene which indicates the miscibility of these products. A. A. Tager and V. A. Kargin studied the heat of solution of polystyrene in ethyl benzene and proved that the heat separation during solution is due to a previous stratification of the chain molecules from CKC-30 (SKS-30) and polystyrene because of the insufficient flexibility of these molecules. A. A. Tager, A. Smirnova, and N. Sysuyeva pointed out the importance of dense stratification of polymer molecules and the change of the volume of the system during their solution. During the experiments it was found that an admixture of up to 25% polyisobutylene and of the rubber types DVKhB-70 and CKC-30-1 (SKS-30-1) to polyethylene as well as vulcanizing improves the physico-mechanical properties of the mixture. These mixtures, vulcanized or unvulcanized, are therefore recommended for practical use. When selecting polymers for the purpose of improving the polyethylene properties, the dielectric permeability and density of molecule stratification of these polymers must be taken into account. There are 9 figures, 4 tables, and 11 references: 9 Soviet and 2 US.

Card 2/2

88316

15.8101

S/191/60/000/002/002/012
B027/B058

AUTHORS: Alekseyenko, V. I., Mishustin, I. U.

TITLE: Combination of Polyethylene With Other Polymers

PERIODICAL: Plasticheskiye massy, 1960, No. 2, pp. 8-13

TEXT: The authors deal with the improvement of the plastic and elastic properties of polyethylene. The thermal resistivity of pure polyethylene is insufficient, and thus it is necessary to admix other polymers in order to increase the tensile strength of polyethylene without reducing or increasing its durability. Ye. Ye. Ryllov and V. L. Karpov (Ref. 6) proved on the basis of electronographic and roentgenographic studies of polyethylene-polyisobutylene mixtures that these polymers yield macrohomogeneous but not microhomogeneous mixtures. N. V. Mikhaylov, Z. V. Ukhanova, V. S. Klimenkov, and Ye. A. Kuril'chikov (Ref. 7) point out that when using polymers as two-, three- or multi-component mixtures for the manufacture of synthetic fibers, the properties of the latter improve. G. L. Slonimskiy and G. V. Struminskiy (Ref. 8) proved that heat is separated when mixing rubber CKS (SKB) and CKC-30 (SKS-30) with

SOV/76-33-4-2/32

Investigation of the Compatibility of Three-component Polymer Mixtures

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh
materialov i iskusstvennoy kozhi
(All-Union Research Institute of Film Materials and Arti-
ficial Leather)

SUBMITTED: July 4, 1957

Card 3/3

SOV/76-33-4-2/32
Investigation of the Compatibility of Three-component Polymer Mixtures

rolling ($140-150^{\circ}\text{C}$) and pressing (10 min, $150-160^{\circ}\text{C}$) of the (P)-mixtures. The experimental results which are tabulated (Table 1) and represented in a triangular diagram (Fig. 1) show that the combination SKN-26 or DVKhB-70 with "nairite" NT proves to be a better plastifier for PVC than dibutyl phthalate (or SKN-26 or a single DVKhB-70) and that mixtures with good properties are obtained (if the PVC-content is not higher than 50%). 2) The system polyvinyl acetate (PVA) + "nairite" NT + polar rubber (as mentioned above) was investigated (after rolling at $50-60^{\circ}\text{C}$). The results (Table 2) show that in analogy to the above mentioned observations a combination of nairite NT and DVKhB-70 with PVA yields mixtures with high physico-mechanical properties. Theoretical investigations of the mechanism of formation of ternary mixtures led to the observation that the compatibility of three components of different polarity depends on the dipole interaction and thus substances with the same or similar dielectric constants are compatible and that on the other hand, a compatibility may be attained in the case of weakly polar and polar (P) by adding a third strongly polar component. There are 4 figures, 2 tables, and 14 references, 12 of which are Soviet.

SCV/76-33-4-2/32

5(4), 15(9)
AUTHORS:

Alekseyenko, V. I., Mishustin, I. U.

TITLE:

Investigation of the Compatibility of Three-component Polymer
Mixtures (Izuchenie sovmestimosti trekhkomponentnykh smesey
polimerov)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 4, pp 757-763
(USSR)

ABSTRACT:

On the basis of the data hitherto published in publications it may be assumed that thermodynamic factors are a determinant factor in the compatibility of polar polymers (P) and that the mechanism of the exchange process is based on the electrostatic interaction of the polar molecule groups of (P). In the present paper it is demonstrated that polar (P) may be mixed with weakly polar (P) in the presence of a third strongly polar (P). Two systems were investigated: 1) polyvinylchloride (PVC) + "nairite" NT (a chloroprene rubber, specific weight = 1.264) + polar rubber (divinyl acryl nitril rubber SKN-26 with 28% acrylonitril groups or rubber DVKhB-70 with 70% chlorovinylidene groups produced by latex coagulation). The compatibility of the (P) was determined according to the tensile strength of (P)-films which are obtained after a

Card 1/3

MISHUSTIN, I.U., kand. tekhn. nauk

Methods for improving the quality of artificial leather. Kozh.-obuv.
prom. no.8:33-35 Ag '59. (MIRA 13:1)
(Leather, Artificial)

ALEKSEYENKO, V.I.; MISHUSTIN, I.U.

Plasticizing polyvinyl chloride, polyvinyl acetate, and nitro-cellulose with carboxyl-containing polymers. Leg.prom. 18 no.6:
18-20 Je '58. (MIRA 12:10)
(Leather, Artificial) (Plasticizers)

MISHUSTIN, I. U.

AIJKSEYENKO, V.I.; BUGOSLAVSKAYA, L.A.; ZAKHARCHEINKO, P.I.; KARAPETYAN, N.G.;

MISHUSTIN, I.U.

Glue made from latexlike NT "nairite." Leg. prom. 18 no.1:23-25
(MIRA 11t2)
Ja '58. (Clue)

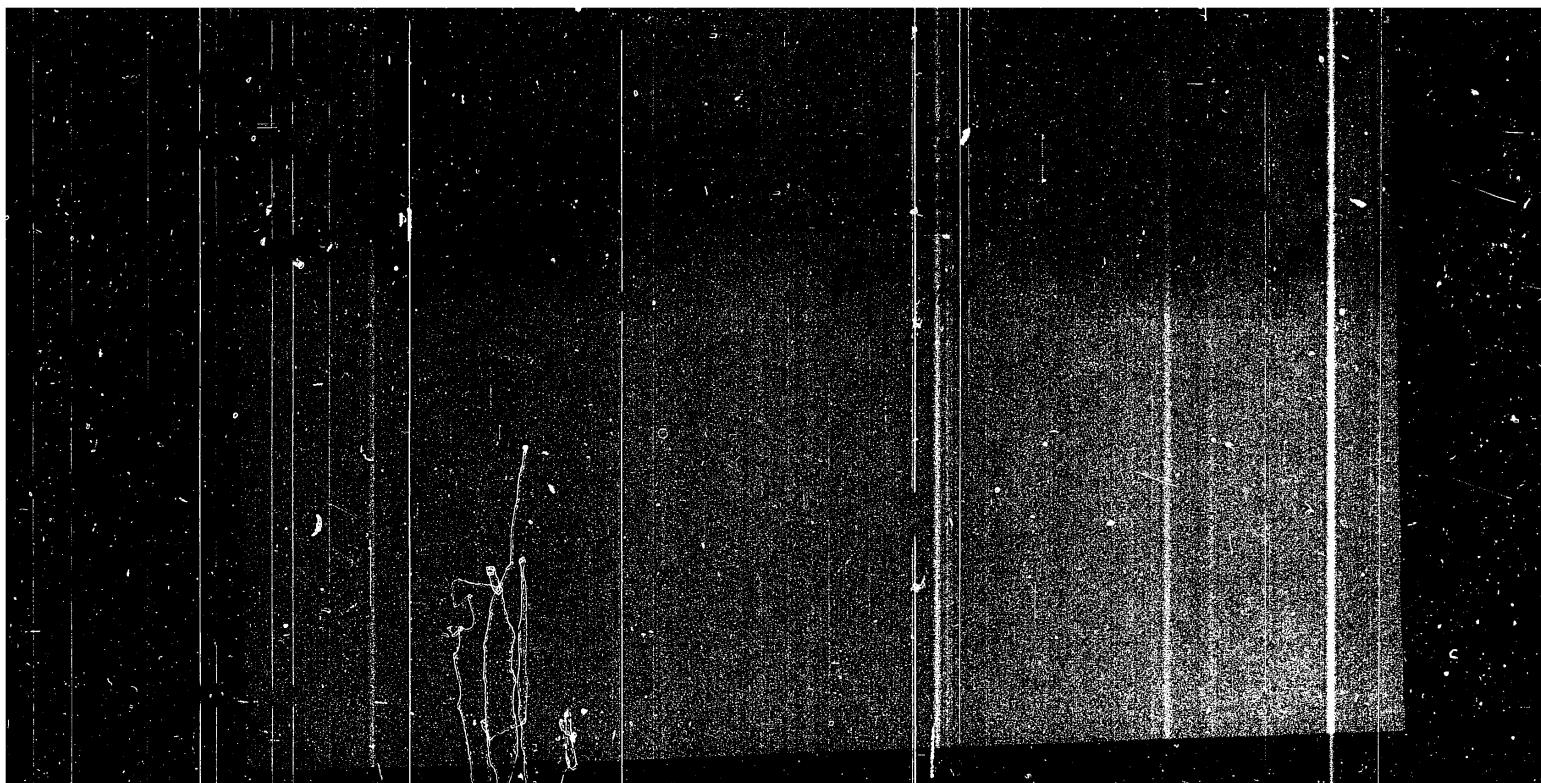
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Mishustin, I.U.

ALEKSEYENKO, V.I.; BLAGOVENOV, B.K.; BUGOSLAVSKAYA, I.A.; ZHUVIKINA, A.I.;
ZAKHAROVENKO, P.I.; MISHUSTIN, I.U.; NISNEVICH, Ye.A.

Use of synthetic gutta-percha in the shoe industry. Leg.prom. 17
no.6:18-20 Je '57. (MIRA 10:8)
(Shoe industry) (Gutta-percha)

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MISHUSTIN, I.U.

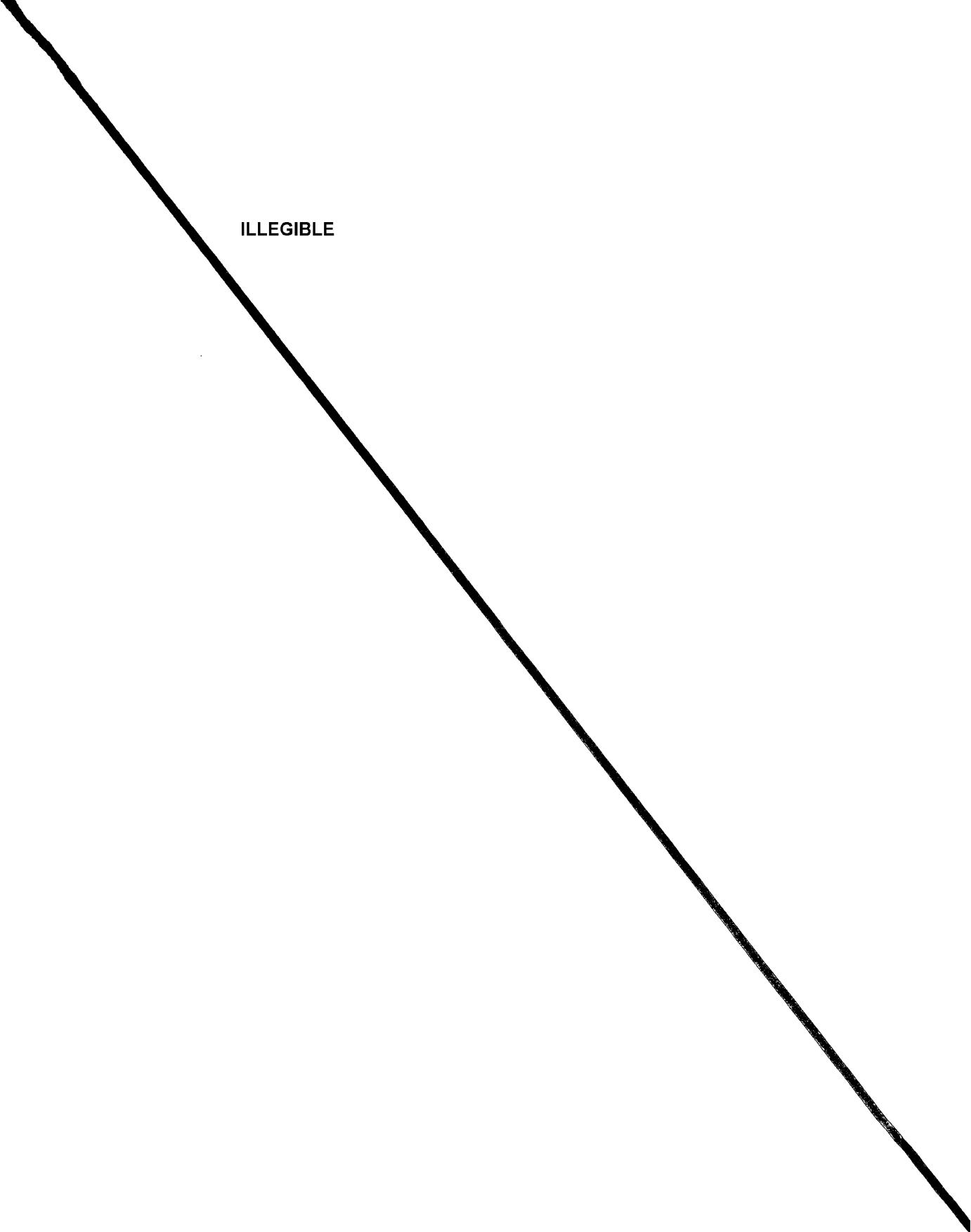
ALEKSEYENKO, V.I.; BUGOSLAVSKAYA, L.A.; MISHUSTIN, I.U.

Compatibility as a basic factor in adhesion of high molecular substances.
Kauch. i rez. 16 no.8:10-15 Ag '57. (MIRA 10:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut zameniteley kozhi
i obuvnaya fabrika "Skorokhod."
(Adhesion) (Macromolecular compounds)

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ILLEGIBLE



USSR/Chemistry of High-Molecular Substances, "

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1122

Author: Alekseyenko, V. I., and Miamustin, I. U.

Institution: None

Title: On the Compatibility of Polyvinylchloride and Polyvinylacetate with Other High Polymers

Original
Periodical: Kolloid. zh., 1956, Vol 18, No 3, 257-261 (English summary)

Abstract: The possibility of combining divinylchlorovinylidene rubber (I) with rigid polymers, e.g., polyvinylchloride (II) and polyvinylacetate, as a plasticizer is established. The dependence of the yield strength and the breaking elongation on the rubber content in the plasticized polymers is given. It is shown that when sheets of II containing I are heated, an increase in the strength of the mixed polymers is noted; this increase is explained by the interaction between the polar groups. The authors hold that the nature of the polar groups is not particularly important for compatibility.

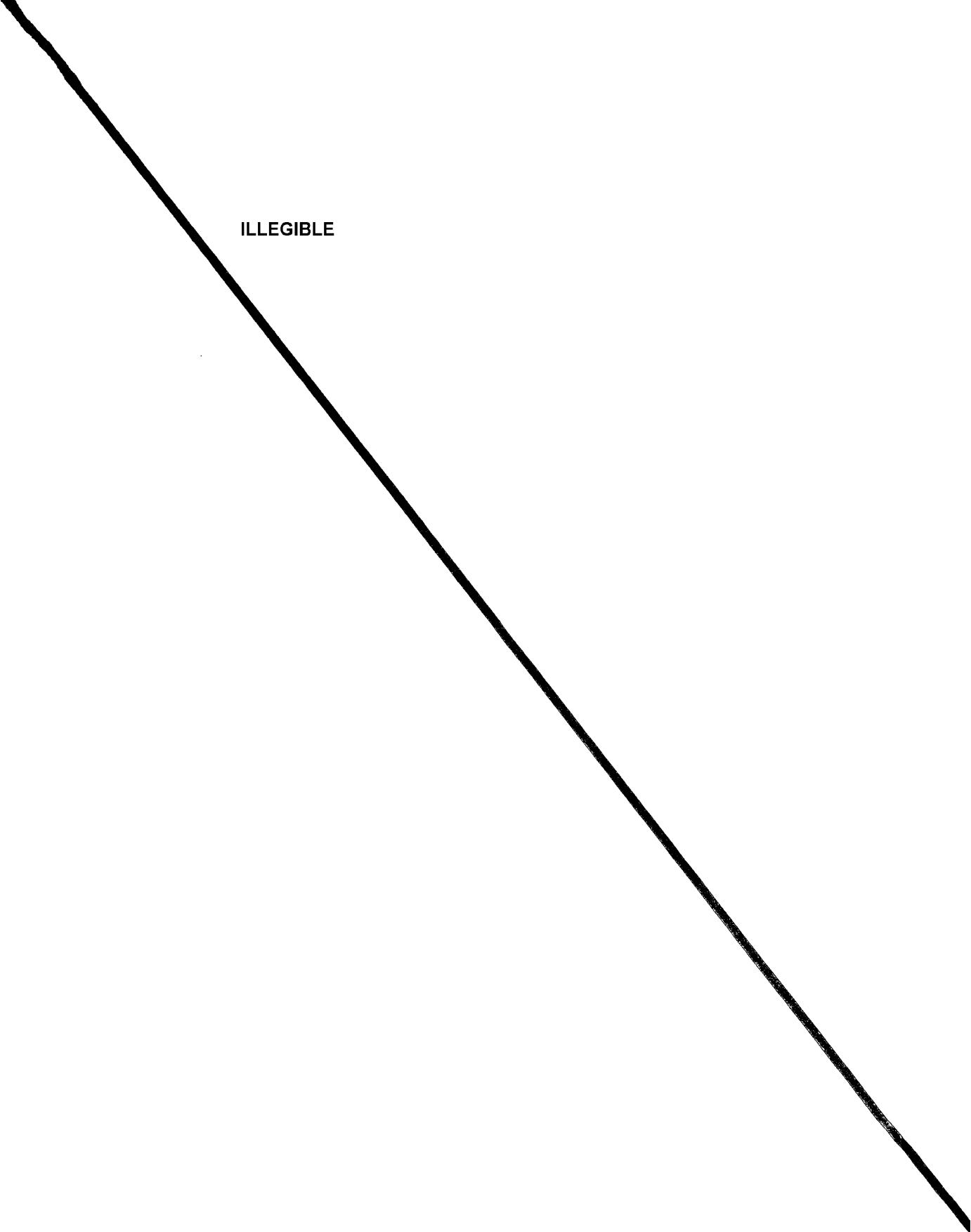
Card 1/1

MISHUSTIN, I.U.

Improving the quality of artificial leather (from "Revue générale du caoutchouc," no. 1 '56, "Kunststoffe," no. 2 '56). Leg.prom. 16 no. 9:52-55 S '56. (MLRA 9-11)
(Great Britain--Textile machinery)

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ILLEGIBLE



MISHUSTIN, I. V.

USSR

Compatibility of nitrocellulose with other high polymers.
V. I. Aleksenko, I. V. Mishustin
Kolloid-Zhur. 17, 3-8 (1955). A
soln. of cellulose nitrate (I) (contg.
a soln. of another high polymer
which were cast on glass. The tensile
film, rated, for the initial cross
film, rated, for the initial cross
section, was 2.34 kg./sq. mm. for $\chi = 12$
while P_t of I was 6.4. The tensile
cross section at rupture increased
40% when χ was 29 or 37%; apparently,
new in redistributing stress only I II contains enough polar
ingredients; otherwise II does not fully mix with I. The
total elongation L was greater the greater the amt. of II and
the greater χ . Addn. of dimethyl phthalate to I increased L
as much as an equal amt. of II with $\chi = 27\%$, but lowered
 P_t to, e.g., 0.1 kg./sq. mm. Other
polymer greatly lowered P_t of I
just as plasticizers in other poly-
mers. J. J. B.

Central Re-Res. Inst. Industry of Rubber Substitutes

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U.S.S.R. - I.I.T.

USSR.

Compatibility of nitrated resins with other high polymers
V. I. Anisimov, T. I. Moshkin, and G. S. Stepanov
Central I.I.T. S.A.K. (Soviet Academy of Sciences) (Radio translation)
See C.A. 46, 7894c. H. L. H.

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Jan

MERBUTIN, I. U., VOYUTCH, S. I. and ALEKSEYEV, V. I.

"The Compatibility of Nitrocellulose with Other High Polymers", Doklady Akademii Nauk SSSR, Novaya Seriya, Vol. 95, No 1, 1954, pp 93-96

Trans

M-110, 21 Jan 55

and Evaluation B-83873, 28 Mar 55

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CA

67

i New raw materials for leather substitutes I. U. Mishus
in "Legkaya Prom." No. 1, 21 (1949). Review of de-
velopments outside of the Soviet Union. 21 references
B. Z. Kamich

20
et
Innovations in the manufacture of rubber parts for shoe
bottoms. I. U. Mishustin. *Legkaya Prom.*, No. 10,
21-31948). A review of Soviet and foreign developments
in 1944-1947 with regard to rubber formulations.
Marshall Sittig

RIM-SLA METALLURGICAL LITERATURE CLASSIFICATION											
SECOND MEL ONLY ONE			THIRD MEL ONLY ONE			FOURTH MEL ONLY ONE			FIFTH MEL ONLY ONE		
SEARCHED	INDEXED	SERIALIZED	SEARCHED	INDEXED	SERIALIZED	SEARCHED	INDEXED	SERIALIZED	SEARCHED	INDEXED	SERIALIZED
14 9 10 11 12 13	14 9 10 11 12 13	14 9 10 11 12 13	14 9 10 11 12 13	14 9 10 11 12 13	14 9 10 11 12 13	14 9 10 11 12 13	14 9 10 11 12 13	14 9 10 11 12 13	14 9 10 11 12 13	14 9 10 11 12 13	14 9 10 11 12 13

Methods of increasing the stability of rubber soles to thermal aging. I. U. Mishustin. *Izgorsk. Prom.* 7, No. 9, 28-30 (1947). Selection of the best type of rubber together with (1) suitable fillers, (2) plasticizers such as liquid polyisobutylene, lin stearate, paraffin, wood fat, dimethylamide, tetraphenylhydrazine, and (3) accelerators and antioxidants, such as mixts of mercaptobenzothiazole and ethylenediamine, mixts of phenyl diaph thiazole and mercaptobenzimidazole, and mixts of anthraquinone and naphthyl quinolobenzimidazole are recommended for increasing stability. — Marshall Setting

(A)

Pencils for the control of temperatures of vulcanized in rubber factories. I. A. Mishustin and G. I. Evdokimova. *Legkaya Prom.* 7, No. 6, 15-16 (1947). Three sets of formulas are given for pencils for the measurement of temp. of rolls (I), of calenders (II), and of vulcanization presses (III). Typical formulas are (I) paraffin, m. 58%; 10.15%; stearic acid, m. 50%; 57.45%; beeswax, m. 70%; 3.85%; ZnO, 10.15%; and methylene blue, 0.40%—giving a pencil m. at 50°C.; (II) rosin, m. 65%; 67.20%; beeswax, 7.80%; S, m. 110%; 5.30%; ZnO, 10.15%; malachite green, 0.75%—giving a pencil m. 80°C.; (III) mercaptoto-green, 0.75%; vulbenzothiazole, 27.80%; S, 30.20%; beeswax, 7.70%; Vulcan orange, 18.30%—giving a pencil m. 150°C. M. S.

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Filler for rubber and other elastomers. T. C. Misra, Jr., U.S. S.N. No. 2,616, May 31, 1951. The object is produced by the reaction of Na-zeolite with caustic alkali, usually in the presence of glucose, casein, antibiotics, acids or other substances which impede crystallization of the elastomer. M. Hirsch

METALLURGICAL LITERATURE CLASSIFICATION

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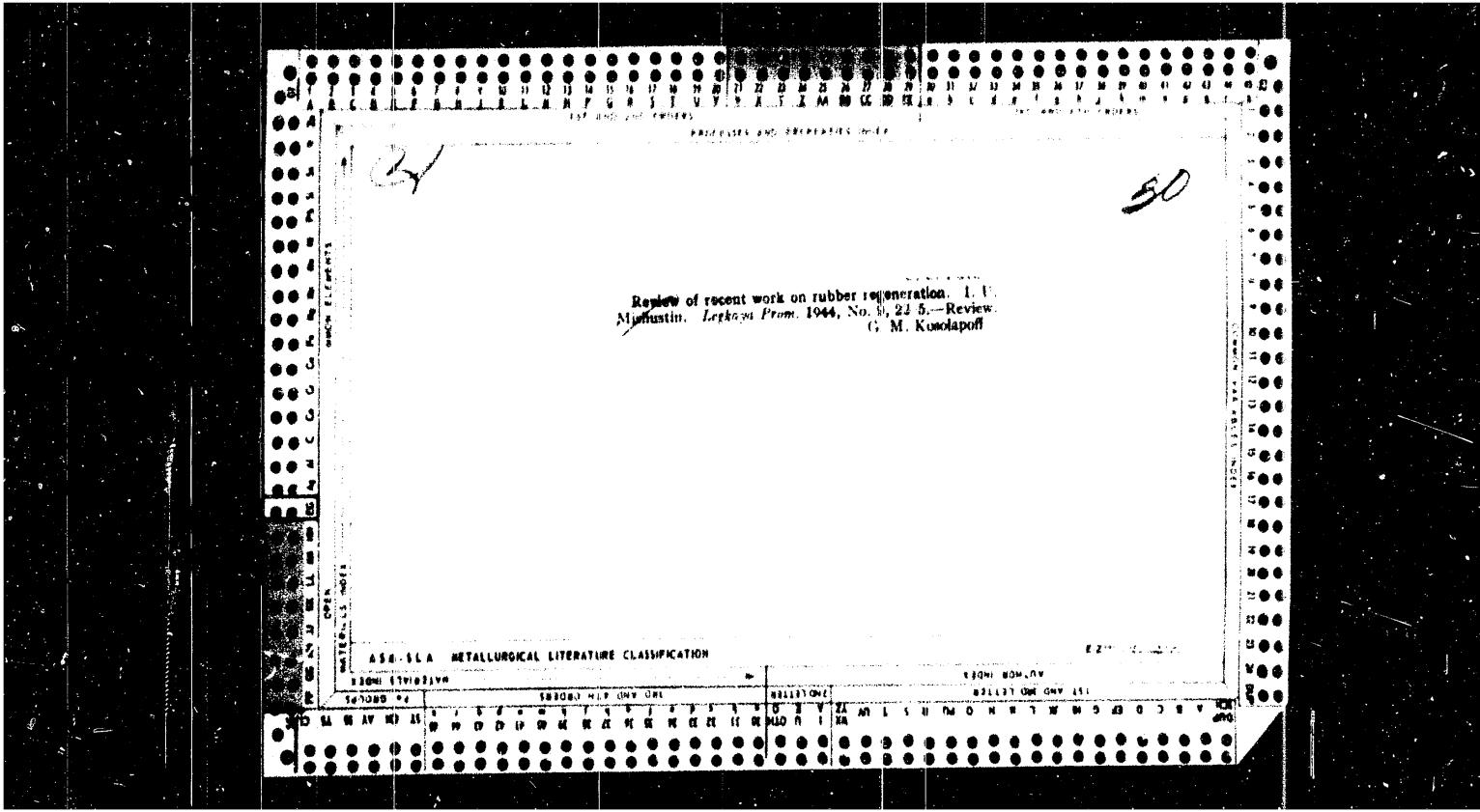
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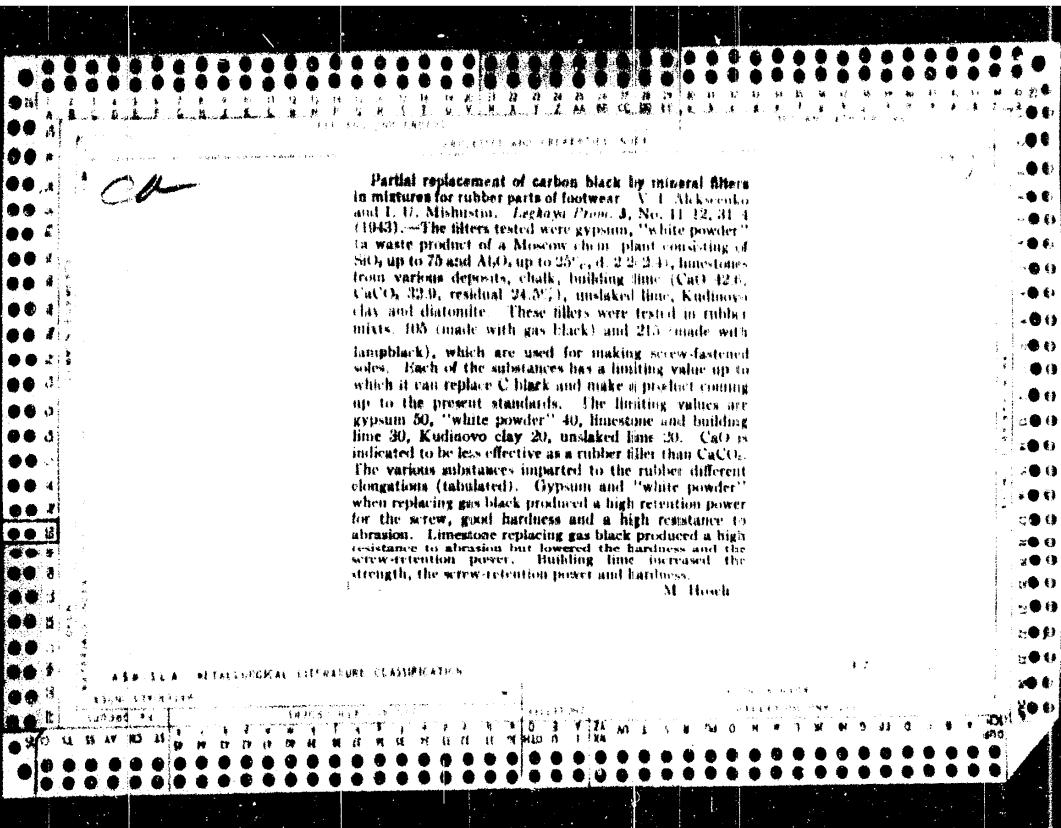
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Rubber filler. I. U. Mishustin, A. P. Pisarenko, I. I. Glazkov, and M. Kh. Bernshtejn. U.S.S.R. 64,297, Feb 28, 1955. As filler for rubber is used lignin treated with surface-active substances having polar groups, such as dyes or soaps. U.S.S.R. 64,298, Feb 28, 1955, specifies a filler of peat treated while hot with a dil. soln. of an alkali hydroxide or Na_2SO_4 , filtered, washed, dried, and ground.

APPENDIX METALLURGICAL LITERATURE CLASSIFICATION

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Light Filters for rubber T. C. Macdonald (*Journal of Polymer Science and Rubber* U. S. S. R., 1940, No. 6, 39-41). Lignin, ground cellulose, peat and acetylcellulose, having ds of 1.36, 1.31, 1.40 and 1.30, resp., were tested as filters in colored rubber soles. The rubber twists contained 30% of synthetic rubber (10 phr. rubber). The filter is imparted some relatively poor phys. mech. properties to the vulcanizates. The filters were then activated as follows: (1) cellulose with 5% HCl or H₂SO₄, at 90° for 3 hrs.; (2) lignin with 5% Bismark brown; (3) peat with NaOH, H₂O₂, Na₃PO₄, and a mixt. of C₆H₅OH and al. resp. Activated cellulose gave a higher relative elongation, and activated lignin increased the tensile strength by 30%, but activated peat did not give pos. results. One-hundred parts activated lignin + 10 parts kaolin gave a tensile strength of 39 kg. per sq. cm., relative elongation 150%, residual elongation 5.5%, and d. 1.30. With 75 parts activated lignin + 12% parts MgO, the values were 47 kg. per sq. cm., 210%, 8.0% and 1.35, resp. With 18 parts activated lignin + 100 parts kaolin + 30 parts MgO, the values were 56.0 kg. per sq. cm., 168%, 7.1% and 1.30, resp.

110, 113.

ASB-SEA METALLURGICAL LITERATURE CLASSIFICATION

Production of reclaimed rubber containing fibers
 I. C. Mishustin, *Cavallina and Kultsev* (U. S. S. R.) 1940, No. 7, 24 s. Tires made from 100% synthetic rubber and contg. 20-25% vegetable fibers were reclaimed by the following process: (1) mixing the ground rubber (2-3 mm.) with softener for 1 hr. at 80-90°C., heating 4 hrs. in steam at 1 atm. and 30 cold mulling 15-20 min. The softeners were pine tar, maroum, camphor, resin, paraffin, 20% oil and mazout (20% resins). These mullings showed uniform distribution of the cord threads in the reclaimed rubber. To get the physical properties, the samples were mixed with 5% and 10% maroum, charcoal, and vulcanized for 20, 40 and 60 min. in sheets 1-mm. thick. Good results were obtained with pine tar, camphor, resin and paraffin (20% resins). 20% mazout also produced good reclaimed rubber but milled unsatisfactorily. With pine tar and maroum, the C/H content of the reclaim was higher than that of the original rubber. The physical properties of these "fiber" reclaims were no poorer than those of sole rubber, although they had considerably lower elongations and elasticity than acid and alk. reclaimed rubbers. They also required more mulling than acid and alk. reclaimed rubbers. The equipment required was less complicated than for acid and alk. reclaims but more complicated than for sole reclaimed rubber. Soles made from these "fiber" reclaims had good physical properties but an unsatisfactory surface.

ASIANA RESEARCH LABORATORY CLASSIFICATION

The influence of the percentages of accelerators on the physical mechanical properties of colored rubber soles.
I. G. Mishustin and A. P. Pisarenko. Kachetchno-Oboronya Prom. 18, No. 9, 31 (1939).--Tests of the mech. properties of soles made of Russian synthetic rubber with various percentages of mercaptobenzothiazole and tetramethylthiuram disulfide are reported. A. A. B.

ASIA-SLA METALLURGICAL LITERATURE CLASSIFICATION

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cd

Aging of rubber. I. I. Mishustin, V. M. Kostylev, and
V. A. S. R. 1919, No. 11, 14 pp. cf. C. A. 34,
3645. Detailed and graphical results are given to show
the effects of various pijs, and their antioxidant and oil S
on the deterioration of rubber by the Gert oven method
for 72 hrs at 70°, natural aging in air for 6 months, aging
in darkness at room temp for 6 months, and in ultraviolet
light. B. J. Knobell

AT&T LIBRARY METALLURGICAL LITERATURE CLASSIFICATION

CLASS NUMBER
MATERIALS SCIENCE AND ENGINEERING

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ca
3Q

Aging of rubber-sole materials. L. U. Mishustin
Koktebel'shchikov. From: S. N. N. R. 1939, No. 7.
310. The effects of various commonly used ingredients
are shown.

ASME LIBRARY
METALLURGICAL LITERATURE CLASSIFICATION

LEONARD HOMBERG
REFERENCE LIBRARY

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Inorganic accelerators of vulcanization. I. M. Baskin and V. A. Alekseenko. *Russ. Gidrokhim. Akad. Vestn.*, No. 1, 1, 2, 29-32; *Khim. Referat. Zhur.*, 1940, No. 3, 100-1. The effects of metal sulfides in unfilled mixes, and oxides and stearates of metals on the vulcanization of rubber mixts. were investigated. Oxides and sulfides of nonalkali metals in unfilled mixts. are slight accelerators. Tests of unfilled mixts. showed that stearic acid has no activating effect on metal oxides and on a control mixt. contg. no caprobenzothiazole. The combination $MgO + Pb(OH)_2$ obtained by heating the nitrate is more active than the same combination from the oxides. The combination of metal stearates is a more active accelerator than the combination of oxides of the same metals even in the presence of stearic acid. The combination $MgO + Pb(OH)_2$ (2.1 m. 4% doses) from nitrates is a more active accelerator than 0.5% of mercaptobenzothiazole. W. R. Henn.

EDUCATIONAL LITERATURE CLASSIFICATION

Preparation of colored rubber soles from synthetic rubber treated with activated fillers. A. P. Pidarenko and I. U. Mikhutin. *Kozhevnoe Oborudovaniye i Sposoby* No. 4, 48-52 (1937); cf. "Tekhnicheskaya Koshka" 1935, No. 8-9; C. A. 30, 3270. Kaolin was activated by mixing with org. dyes and used as a filler in synthetic rubber. Phys. chem. tests of the filler treated with various dyes prep'd. in different ways were carried out. The best formula for shoe soles was: synthetic rubber 100, kaolin (activated) 40%, ZnO 2, S, 3, monobenzothiazole 0.01, tetramethylthiuram disulfide 0.15, and stearic acid 1. The results obtained in the activation of kaolin with d. org. dyes and treatment with $\text{Ca}(\text{OH})_2$, $\text{Fe}(\text{OH})_3$ and FeSO_4 solns. are discussed. A. A. Podoren'ev

ASH-SEA METALLURGICAL LITERATURE CLASSIFICATION

EIGHTH EDITION

DECEMBER 1961

L

Adsorption and activation of carbon black. I. Mishustin and A. Ivanova. *Gummi und Rubber* (U.S.S.R.) 1937, No. 7-8, 35-7. The proportion of rubber that was adsorbed by C black from a soln. of rubber in C₆H₆ increased with increased concn. of rubber soln. and prolonged time of shaking the mixt. (4.89% at 0.09% concn. and 21.52% at 0.23%; five min. of shaking). The adsorbing property of kaolin toward rubber did not change with the concn. The C black was activated with 2% soln. of different org. substances and then dried at 100-105°. The adsorption of rubber increased considerably after activation; after treatment with $\text{MgCl}_2\text{H}_2\text{SO}_4\text{Cl}$ for 2 hrs. the adsorption of rubber was 50.0% compared with 12.67% of unactivated C black. The most active substances are those contg. NH, NH₂, CO and SO₄ groups. The 2% ap. solns. of different org. substances were adsorbed on C black and kaolin. Amino compds. were adsorbed more readily by C black (6.00%) than by kaolin (1.00%), because they polarized the surface of C black.

A. Postoff

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700048-6

Sealing composition. I. U. Mishustin and I. I. Glazkov. Russ. 45,701, Jan. 31, 1938. Rubber waste, Aubrax and rosin are liquefied and into the melt, are introduced Zn stearate, kaolin or other fillers, and diethyl phthalate.

ASM-SEA METALLURGICAL LITERATURE CLASSIFICATION

Activation of fillers for rubber mixtures. A. I. Lisenko and I. U. Mishustin. *Aktyereng Obzornye Prom.* 14, 810-14(1935); cf. C. A. 29, 7065. Expts. show that when lampblack is treated, before its incorporation into rubber, with 0.1 or 0.3% solns. of rubber in gasoline, its activity is improved so that the vulcanizates are 38% stronger and 65% more elastic. The improvement is still greater with lampblack treated with a gasoline soln. containing 0.5% rubber and 1% stearic acid. With higher proportions of treated lampblack in the rubber, slight decreases in the strength and increased elasticity were observed. A 0.3% gasoline soln. of Na binylin rubber also activates lampblack in synthetic rubbers (10 parts of treated lampblack per 100 parts of butadiene rubber) and increases the tensile strength 80%, and the elasticity 100%. These activators have a similar effect on kaolin. Kaolin treated with 5% K_3HPO_4 also improved the properties of rubber. Substances activating lampblack and kaolin are not effective with lithopone. Lampblack treated with 5% $Al_2(SO_4)_3$ in the presence of up to 100% Rubberex (on the rubber) gave considerably higher tensile strengths and elongations (3-4 times) of rubber. The elasticity of the rubber was increased 2-2.5 times and the strength unchanged, by treatment of lampblack with 5% Na nitrate and 5% K_3HPO_4 solns. The results are tabulated and plotted. A. A. Hochtingk

ASA-SEA METALLURGICAL LITERATURE CLASSIFICATION

ECON. & IND.

PARSED AND EXTRACTED 2014

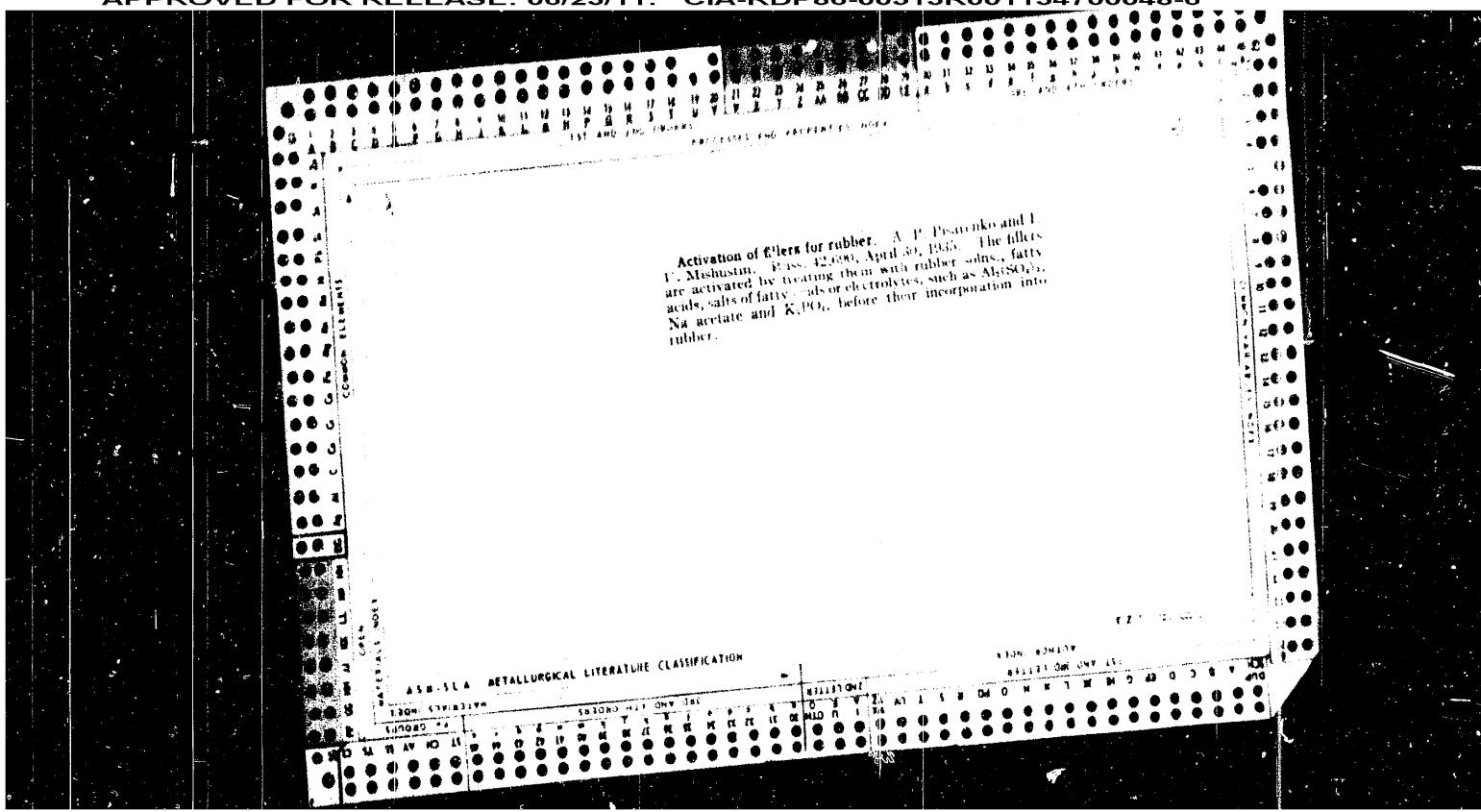
Activation of the fillers of rubber mixtures. A. P. V. Denko and I. Mishustin. *J. Rubber Ind.* U.S.S.R. 16, 42-59 (1955). Carbon black and kaolin were activated with (1) 0.1, 0.3 and 0.5% natural rubber in C_6H_6 ; (2) 0.1, 0.3 and 0.5% Na-butadiene rubber in C_6H_6 ; (3) 0.5 and 0.6% stearic acid in C_6H_6 ; (4) 0.5 and 1% aq. Na stearate; (5) 1.5% Zn stearate; an isoprene-aq. Zn stearate; (6) 0.5% K₂HPO₄; and (7) combinations of the above. C black and kaolin were wet with the activator. In the

proportion of 1:2 for C black and 1:1 for kaolin and dried at 100-200°. Rubber mixts. were prep'd. of rubber (natural or styrene) 100, ZnO 10, S 4, mercaptobenzothiazole 1.5, to which were added different proportions of activated C black (10, 60, 80, 100, 120, 125%) or activated kaolin (10, 60, 80, 100, 140%). The activation of C black with rubber in C_6H_6 increased the tensile strength and elongation of rubber mixts. (contg. 40% C black). Activated kaolin increased the mech. prop'ties when used in large proportions (100 and 110%). Ethapone activated with 0.3% rubber in C_6H_6 or with 0.6% rubber in C_6H_6 and 1% Zn stearate in isoprene lowered the mech. prop'ties of rubber mixts.

A. Postol

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700048-6

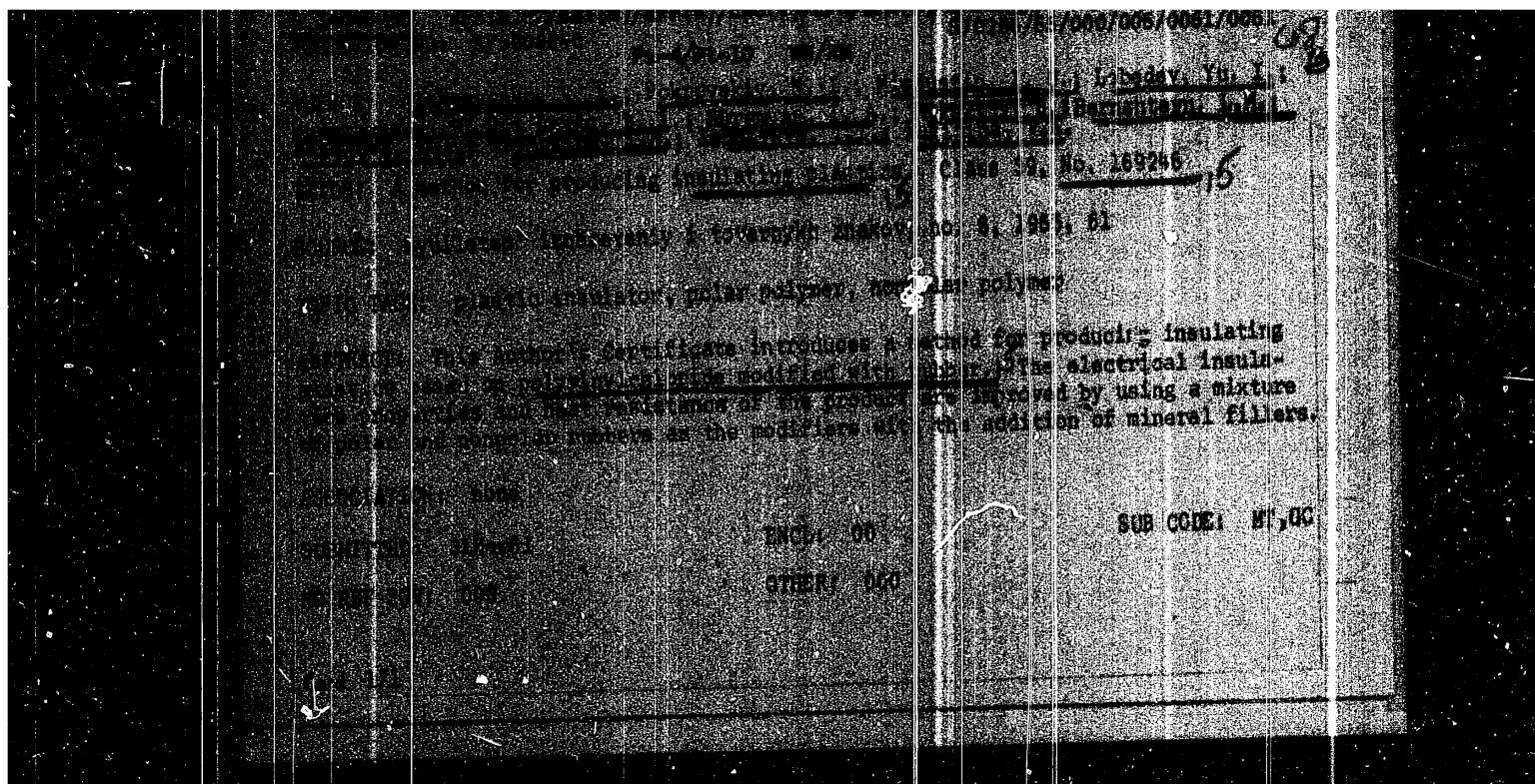
Activation of fillers for rubber. A. P. Pisarevko and I. V. Mishustin. Russ. 42,980, April 30, 1935. The fillers are activated by treating them with rubber salts, fatty acids, salts of fatty acids or electrolytes, such as $\text{Al}(\text{SO}_4)_3$, Na acetate and K_3PO_4 , before their incorporation into rubber.



Vinose cement. A Mishkin (Vysokomol. Organičesk. Sist., N. S., N. R. 1972, 14(3)) additive contains 10% alkali cellulose and a small amount of NaOH; the excess of the latter is removed during crosslinking. Instead of fatty acid, abietic acid may be used. The material, after having been cemented with vinose, is treated with fatty acids.

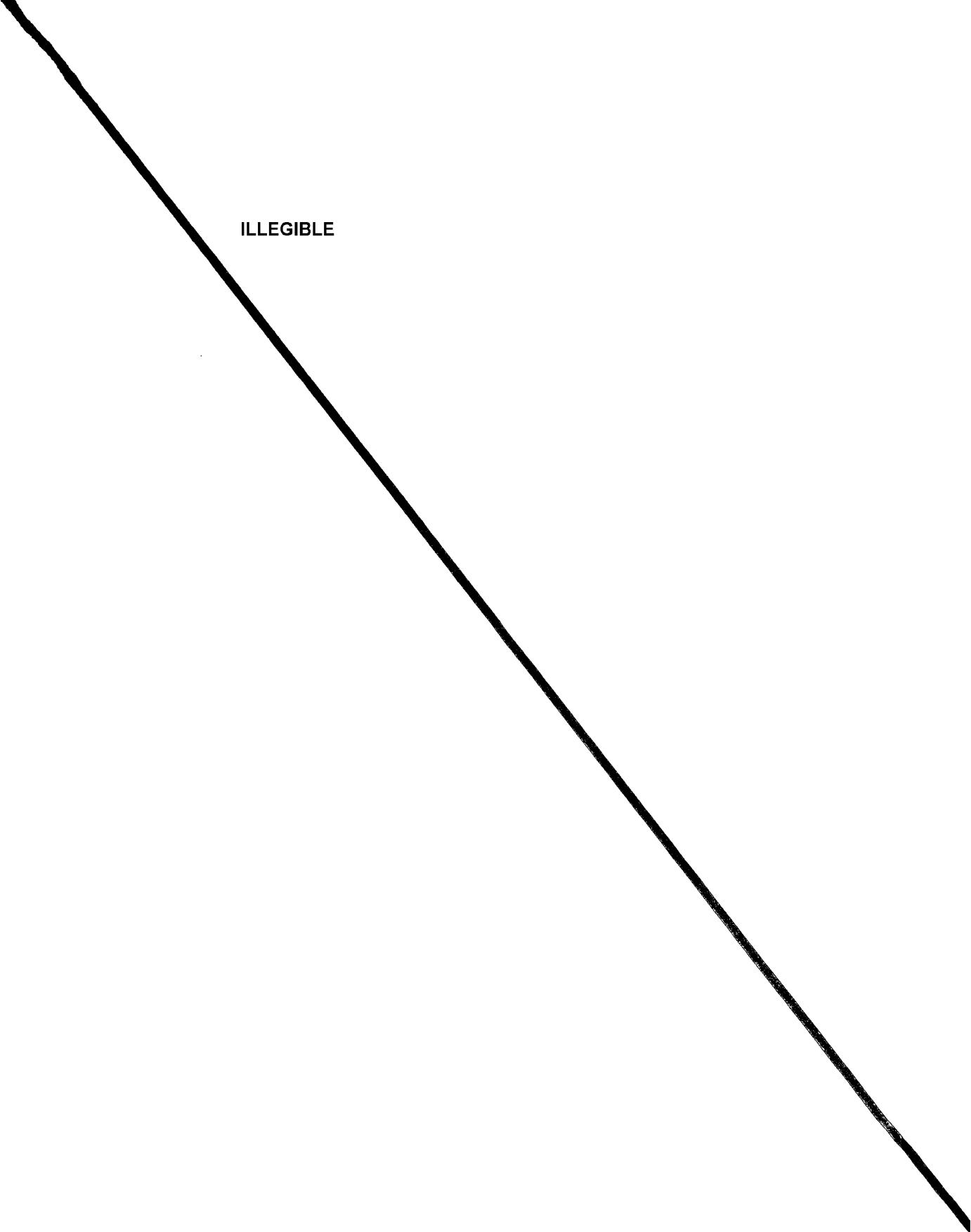
Determination of permanganate in the presence of manganese. A. I. MARIKOV
L. U. MISHKUTIN AND I. A. KAZAKNOVSKII. *J. Chem. Ind.* (Moscow) 7, 601 (1960).
First det. the oxidizing power against $H_2C_2O_4$. Take 25 cc. of 0.1 N $H_2C_2O_4$, add
35 cc. of 2 N H_2SO_4 , 100 cc. of water and 1 cc. of H_2O_2 . Titrate with the soln. to be
analyzed at 80-90°. Then det. the total Mn by reducing to MnO_2 and titrating
iodometrically as follows. To 25 cc. of soln. add 30 cc. of 0.1 N $NaHCO_3$ (5 g $HC_2H_4O_2$
+ 15 g $NaOH$ per l.) and heat at 60° for 15 min. To the cooled, decolorized soln.
add 10 cc. of 20% KI , 90 cc. of water and 40 cc. of 10% H_2SO_4 . Titrate with 0.1 N
 $Na_2S_2O_3$. From the results of these 2 titrations compute the MnO_4^- and MnO_2
contents. V. D. KARPENKO

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700048-6



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700048-6

ILLEGIBLE



ALEKSEYENKO, V.I.; CHEKRIZOVA, A.P.; MISHUSTIN, I.O.; ZAVEL'GEL'SKIY, L.M.;
L'VOVA, L.V.; SHEYDINA, T.Z.; KREKSHINA, G.L.

New quick-setting adhesive for gluing soles. Kozh.-obuv.prom.
4 no.3:18-20 Nr '62. (MIRA 15:6)

(Adhesives)
(Shoe manufacture)

L 20452-66 EWT(s)/EP(1) IJP(c) RF/CG
ACC NR: AP6007822 SOURCE CODE: UR/0120/66/000/001/0125/0125

AUTHOR: Mishustin, I. A.

ORG: none

TITLE: Stabilizing circuit for inverted tubes

SOURCE: Pribory i tekhnika eksperimenta, no. 1, 1966, 125

TOPIC TAGS: electrometer, inverted electron tube

ABSTRACT: The inverted circuit of an electron tube (triode) used for finding anti-logarithms has this serious shortcoming: a considerable effect of the cathode emission on the output voltage. To overcome this drawback, addition of a "stabilizing" circuit is suggested; a (1500-ohm) resistor and a microammeter form a closed circuit between the tube grid and any tube additional electrode. This simple device stabilizes the main measuring circuit to such an extent that the tube amplitude characteristic changes but little when the heater voltage is varied within 5.5--6.5 v. Orig. art. has: 2 figures.

[03]

SUB CODE: 09 / SUBM DATE: 22Apr64 / ORIG REF: 001 / OTH REF: 000 / ATD PRESS: 4222

Cord 1/1

UDC: 621.316.721.1:621.385.7

L 21665-66 EWT(1)/EW(h)
ACC NM: AP6001576 (N) SOURCE CODE: UR/0120/65/000/006/0116/0120

AUTHOR: Mishustin, I. A.

ORG: none

TITLE: Using luminescent capacitors in electronic equipment

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1965, 116-120

TOPIC TAGS: luminescent capacitor, electronic equipment

ABSTRACT: A general discussion is presented of the glow-capacitor characteristics, uses, and possibilities; the ZnS-Cu phosphor with and without activators is considered. Curves of capacitor brilliance, spectra, loss angle, and efficiency vs. applied voltage and frequency are discussed. These applications are examined: (1) Display panel or mimic bus; (2) Resonance indicator (for tuning h-f oscillators); (3) Wavemeter or frequency meter; (4) H-f voltage indicator (with a variable-thickness phosphor layer); (5) Beat indicator; (6) Frequency multiplier (a single stage with a ratio of 2, 4, 6, or 8). Principal circuits and data for the above applications are given. Orig. art. has: 10 figures and 5 formulas.

SUB CODE: 09 / SUBM DATE: 13Nov64 / ORIG REF: 002 / OTH REF: 001

Card 1/1
LC

UDC: 621.3.032.35:621.37

22
B

MISHUSTIN, I.A.

Automatic stabilization of amplification of tube cascades.
Prib. i tekhn. eksp. 9 no.1:206-207 Ja-F '64. (MIRA 1714)

MISHUSTIN, I.A.

Amplifier-attenuator. Prib. i tekhn. eksp. 7 no.2:95-96 Mr-Ap
'62. (MIRA 15:5)
(Amplifiers, Electron tube)

MISHUSTIN, I.A.

Potentiating modulator for a simple computer. Krib. i tekhn.
eksp. no.3:86-89 My-Je '60. (MIRA 14:10)
(Electronic calculating machines)
(Modulation (Electronics))

A Circuit for Taking Powers

SOV/120-59-2-32/90

There is also considerable variation in performance among valves of the same type.
There are 2 figures and 2 references, 1 of which is Soviet and 1 English.

SUBMITTED: April 1, 1958

Card 2/2

AUTHOR: Mishustin, I.A. SOV/120-59-2-32/50
TITLE: A Circuit for Taking Powers (Ob odnoy skheme potentsirovaniya)
PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 2,
pp 115-116 (USSR)
ABSTRACT: The voltage-current characteristic of a diode is often used for taking the logarithm of an analogue quantity in order to compress a dynamic range. The circuit of Fig 1 may be employed for the inverse operation of taking anti-logarithms of analogue quantities. It is based on the relationship, described in Ref 2, between the grid current and anode voltage for a pentode with negative anode supply and positive grid bias. With a 6SK7 valve for example, a useful 12-15 db range is available. Fig 2 shows the performance of the Soviet 6K3 valve. The output is a voltage across a series grid resistor which should not exceed 3-5 kilohms. A useful ambit of 60 db can be obtained, the maximum voltage being about 0.2 V. It is a disadvantage of the circuit that this level cannot be much exceeded.

USSR/Cultivated Plants - Grains

M-4

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1510

the yield. The best results were obtained with the double
interlinear hybrid F₁ - Rostovskiy.

Card : 2/2

MISHUSTIN, D.D.

USSR/Cultivated Plants - Grains

M-4

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1510

Author : P.S. Rantovaya, N.V. Voytenko, G.V. Zhukov, A.I. Milovzorov,
F.A. Mironchenko, D.D. Mishustin, Ya.Kh. Khairullin

Inst : Not Given

Title : Experiments with Corn

Orig Pub : Sh. nauchno-issled. rabot. Azovo-Chernomor, c.-kh. inst,
1956, 14, 5-18

Abstract : In 1955 there was a study of methods of harvesting corn in the Rostovskaya and Kamenskaya Oblasts. Preliminary results of the tests while working the soil according to the Mel'tsev method have shown an increase in the yield of cobs to 15 centners per hectare. The favorable effect of heading the prop roots of VIR-42 corn with solutions of urea (1%) and of ammonium sulfate (1%) (plant feeding improved, ripening was considerably accelerated and the yield increased). The prop root supplemental of feeding P_2O_5 (1 : 10) caused some scorching of the corn leaves. Treating the seeds with microelements and concentrations of $MnSO_4$ 0.08%, $ZnSO_4$ 0.04% has also increased

Card : 1/2

MISHKIN, D. D.

MISHKIN, D. D. "The effect of certain conditions of mineral nutrition on the resistance of potato foliage to frost", Trudy nauch.-tekhn. konf. po sel'sk. khozyaistv. (in-6), XIII, 1948, p. 13-23; - Kallag: Z. 1948.

SC: U-4293, 19 August 53, (Listopad "Zurnal' nauchnoi sluzby", No. 42, 1953).

L 18553-66 EM(1)/ENA(h)

ACC NM: AP6002302 (N) SOURCE CODE: UR/0141/65/008/006/1178/1186

43

AUTHOR: Mishustin, B. A.

ORG: Moscow Power-Engineering Institute (Moskovskiy energeticheskiy institut)

TITLE: Radiation from the aperture of a circular waveguide with infinite flange

SOURCE: IVUZ. Radiofizika, v. 8, no. 6, 1965, 1178-1186

TOPIC TAGS: electromagnetic radiation, circular waveguide, waveguide antenna

ABSTRACT: A formula is developed for the factor of reflection of TE_{11} -mode by the aperture of a circular waveguide equipped with an infinite flange; a stationary equivalent admittance of the aperture for the above mode is considered. This technique obviates an extremely difficult solution of the Fredholm first-kind integral equation, yet provides a fairly accurate answer. The problem is important for waveguide-type antenna design. An integral equation for the tangential component of the vector of electric-field strength in the aperture is set up. By using the above technique, formulas for a general case are obtained which allow for different dielectric constants within and without the waveguide. The formula for the reflection factor permits simple measurement of the external medium parameters on the basis of the field distribution within the waveguide. Orig. art. has: 6 figures and 37 formulas.

SUB CODE: 09 / SUBM DATE: 03May65 / ORIG REF: 002 / OTH REF: 001

Card 1/1 MJS

UDC: 621.372.812

MISHUSTIN, A., gyardit. Izhevskaya.

Don't only teach, but also train. Koms. Zorush. Sib. 5 nov. 23 1936 5 15.
(MIRA 181)

L 53997-65
ACCESSION NR: AP5017373

group into the ring not only does not increase the activity of the compound, it may even decrease it; (5) growth stimulation also depends on the spatial structure of the molecule. Orig. art. has 6 tables.

ASSOCIATION: Institut organichenkoj khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR); Institut kartofel'nogo khozyaystva, Akademii nauk TurkmenSSR (Institute of Potatoe Growing, Academy of Sciences TurkmenSSR); Institut botaniki, Akademii nauk TurkmenSSR (Institute of Botany, Academy of Sciences TurkmenSSR); Institut ovoshchchnogo khozyaystva, Akademii nauk TurkmenSSR (Institute of Vegetable Growing, Academy of Sciences, TurkmenSSR).

SUBMITTED: 02Jun64 ENCL: 00 SUB CODE: LS, 00
NR REF Sov: 004 OTHER: 001 JPRS

Card 2/2

L 53997-65
ACCESSION NR: AP5017373

UR/0020/65/160/004/0960/0963

AUTHOR: Kugatova-Shemyakina, G. P.; Ushakova, V. F.; Budenko, V. A.; Smirnova, G. P.;
Greshchuhnikov, A. I.; Mishurovskaya, L. M.; Agakishiyev, D. A.; Pen'kov, L. A.

TITLE: New growth stimulators

SOURCE: AN SSSR. Doklady, v. 160, no. 4, 1965, 960-963

TOPIC TAGS: plant development

Abstract: Compounds from the following groups were synthesized by the authors and found to be highly active as plant growth stimulators: delta-3-cyclohexenyl- and cyclohexylbutanones, delta-3-cyclohexenylbutenones, cyclohexylbutanes, and cyclohexylbutenones. The authors were particularly interested in determining the relationship between the structure and degree of activity of the compounds. Laboratory and field tests on the potato showed: (1) compounds of the cyclohexene series were more active than the corresponding compounds of the cyclohexane series; (2) the introduction of a methyl group into the ring, especially in position 2 or 6, significantly increased the activity of the compound; (3) the substitution of a phenyl for a methyl group increases the activity even more; (4) the introduction of a second methyl

Card 1/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700048-6

TOKHTUYEV, G.V., gornyy inzh.; BORISENKO, V.G., gornyy inzh.;
MISHUROV, Ye.M., gornyy inzh.

New rock strength indicator and its manufacture in the mine.
Ugol' Ukr. 6 no.6:37 Je '62. (MIRA 15:7)
(Rocks--Testing)

POMENKO, V.Yu.; SHCHERBAKOVA, K.F.; ANISTRAT, N.D.; MISHUROV, Ye.M.

New data on the interrelations between the rocks of the middle
and upper series in the Krivoy Rog Basin. Dokl.AN SSSR 108 no.3:
535-537 My '56. (MLRA 9:8)

1. Predstavлено академиком А.Г. Бетехтиным.
(Krivoy Rog--Rocks)

FROLOV, A.; MISHUROV, N.; GORODNICHENKO, I.; ZAGOJUYKO, M.; AMETSHAYEV, I.

The virgin lands should have fully qualified machine-operating personnel.
Prof.-tekh. obr. 18 no.1:1-2 Ja '61. (MIA 14:2)

1. Direktor Uchilishcha mekhanizatsii sel'skogo khozyaystva No.35
Severo-Kazakhstanskoy oblasti (for Frolov). 2. Direktor Uchilishcha
mekhanizatsii sel'skogo khozyaystva No. 47 TSelinnogo kraya (for
Mishurov). 3. Direktor Uchilishcha mekhanizatsii sel'skogo khozyaystva
No.13 Zapadno-Kazakhstanskoy oblasti (for Gorodnichenko). 4. Direktor
Uchilishcha mekhanizatsii sel'skogo khozyaystva No. 76 Kustanayskoy
oblasti (for Zagoruyko). 5. Direktor Uchilishcha mekhanizatsii sel'-
skogo khozyaystva No.23 Alma-Atinskoy oblasti (for Ametsbayev).
(Kazakhstan—Farm mechanization—Study and teaching.)

MISHUROV, E.A.

Prevention of errors in the study of gas content of the blood.
Lab. delo no.10:587-589 '64. (MIRA 17:12)

1. Kafedra obshchey khimii Minskogo meditsinskogo instituta.

MISHUROV, E.A.

Volumetric apparatus without mercury for microdetermination of
the content of gases in the blood. Lab. delo no.10:579-587 '64.
(MIRA 17:12)

1. Kafedra obshchey khimii (zaveduyushchiy - dotsent V.A.
Bandarin) Minskogo meditsinskogo instituta.

MISHUROV, S.

Micromethod for determining gases in the blood. Zdrav. Bel. 6
no.12:27-32 D '60.
(MIRA 14:1)

1. Kafedra obshchey khimii Minskogo medinstituta (zav. kafedroy -
dotsept V.A. Bandarin).
(BLOOD, GASES IN)

MISHUROV, A.

School construction lot. Prof.-tekhn. obr. 19 no.6:17 Je '62.
(MIRA 15:7)

1. Direktor stroitel'nogo uchilishcha №.15, Kemerovskaya
oblast'.

(Building trades--Study and teaching)

G.
MISHURNYY, G., polkovnik, voyenny letchik-instruktor pervogo klassa
The mistake of airman, A. Gladchenko. Vest. Vozd. Fl. no.12:
58-60 D '61. (MIRA 15:3)
(Airplanes, Military--Landing)

MISHURNYY, G.G., polkovnik, voyennyy letchik pervogo klassa; DMITRIYEV,
V.D., podpolkonik

From frontier to frontier. Vest.Vozd.Fl. no.8:35-40 Ag '61.
(MIRA 14:8)
(Aeronautics, Military--Study and teaching)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700048-6

MISHURMY, G.G., polkovnik, voyennyy letchik-instruktor pervogo
klassa

The trainee lands with a stalled engine. Vest.Vozd.Fi.
no.7:57-63 Jl '60. (MIRA 13:7)
(Jet planes--Landing)

MISHURNYY, G.G., polkovnik, voyenny letchik-instruktor pervogo klassa

Weather reconnaissance during the day and night. Vest.Vozl.FI.
no.5:42-48 My '60. (MIRA 13:7)
(Aeronautics in meteorology)

B 06360-67
ACC NR: AT6015359

where τ is the transmission time of one nine-digit BCD number from the terminal into the buffer, including the manual entry on the keyboard, providing that such transmission occurs simultaneously with the entry, τ_1 is the transmission time of the results from the buffer to the terminal, $t_{10 \rightarrow 2}$ is the conversion time from decimal into BCD code, $t_{2 \rightarrow 10}$ is the conversion time from BCD into decimal, t'' is the time for the actual solution of the problem by the computer, t' is the duration of the interrupt subroutine, l is the number of the initial variables at the terminal. For the Minsk-2 computer, $T_{\text{term}}^{(l)}$ for an arithmetical problem containing one variable is 30.87 seconds (calculation of elementary mathematical functions), two variables--29.88 seconds, and five variables--32.13 seconds. The variation of $T_{\text{term}}^{(l)}$ as a function of the number of terminals, and the delay time for the simultaneous operation of several terminals are also analyzed and the appropriate formulas are given. All derived expressions are valid for any multi-terminal computer system. The operation of an installation in which the I/O terminals are arranged in groups is discussed and its advantages are pointed out. In this system several terminals time-share a single communication line and a single section in the input buffer. Orig. art. has: 16 formulas, 4 tables.

SUB CODE: 09/ SUBM DATE: 15Dec65

Card 2/2 MKE

L 06360-67 EWP(k)/EWT(d)/EWP(h)/EWP(l)/EWP(v) IJP(c) GG/BB/GD
 ACC NR: AT6015359 SOURCE CODE: UR/0000/65/000/000/0014/0020

AUTHOR: Mishurnaya, M. V.

74
22
6.71

ORG: none

TITLE: Certain timing characteristics of a multi-terminal computer 166

SOURCE: AN BSSR. Institut tekhnicheskoy kibernetiki. Vychislitel'naya tekhnika (Computer engineering). Minsk, Nauka i tekhnika, 1965, 14-20

TOPIC TAGS: computer control system, computer input unit, computer output unit, computer switching, digital computer system, computer technology, remote control system

ABSTRACT: The present paper is a sequel to one entitled "The Multi-terminal Computer" by the same author contained in the same publication. Each terminal is an input/output teletypewriter linked to a buffer section in the main unit. An interrupt subroutine in the computer is initiated from the input buffer when new data are fed from one of the terminals or when the results of calculations are to be transmitted back to a particular terminal. This subroutine contains provisions for a delay and certain priority decisions to allow for an orderly processing of information by the computer. The time required for a processing of a problem originating from a terminal can be calculated as follows:

$$t_{\text{term}} = \frac{t_{10,2}l + t' + t'' + t_{2,10}}{t(l+1) + t_{10,2}l + t' + t'' + t_{2,10} + \tau_1},$$

L 06359-67

ACC NR: AT6015358

calculators. For example, the calculation of any trigonometric function (including data entry and answer print-out) requires only 5-6 seconds, whereas simple multiplication requires 4-5 seconds on a desktop calculator. The economic advantages of multi-terminal computer operation will no doubt make its use widespread in the future. Orig. art. has: 1 table.

SUB CODE: 09/ SUBM DATE: 15Dec65/ ORIG REF: 000/ OTH REF: 000

Card 212 MLE

L 06359-67 EWP(k)/EWT(d)/EWP(h)/EWP(l)/EWP(v) IWP(c) AG/BB/GD
ACC NR: AT6015358 SOURCE CODE: UR/0000/65/000/000/0010/0014

AUTHOR: Mishurnaya, M. V.

ORG: none

TITLE: Multi-terminal computer (6)

SOURCE: AN BSSR. Institut tekhnicheskoy kibernetiki. Vychislitel'naya tekhnika (Computer engineering). Minsk, Nauka i tekhnika, 1965, 10-14

TOPIC TAGS: computer control system, computer input unit, computer output unit, computer switching, digital computer system, computer technology, remote control system

ABSTRACT: A computer time-sharing/Minsk-2 computer system based on multiple input-output terminals is described. The author proposes the replacement of electro-mechanical or manual desktop calculators by remote user terminals, which would permit routine processing of numerical data, e.g., during the preparation of computer programs. Two methods are proposed which in essence amount to "on-line" and "off-line" data-processing. The first method consists of preparing a punched tape on the remote terminal and then using this tape as an input to the computer; the second method, described in more detail involves the use of teletypewriters linked through suitable buffers to the input terminal of the computer. As an example a multi-terminal system, the Minsk-2 computer equipped with several remote I/O terminals is described and its efficiency in calculating a number of simple mathematical functions is compared to the electro-mechanical

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